(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



PORTA CONTOU D EURIN COM CONDENIO CON PORTA CON CONTOUR CONTOUR CONTOUR CONTOUR CONTOUR CONTOUR CONTOUR CONTOUR

(43) International Publication Date 19 May 2005 (19.05.2005)

PCT

(10) International Publication Number WO 2005/045881 A1

(51) International Patent Classification⁷: H01J 61/44, C09K 11/59

(21) International Application Number:

PCT/IB2004/052256

(22) International Filing Date:

2 November 2004 (02.11.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 03104155.1 11 November 2003 (11.11.2003) E

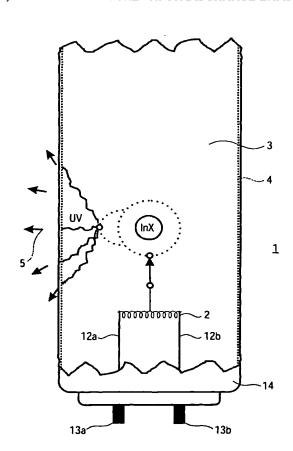
- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HILDENBRAND, Volker, D. [DE/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). SENSEN, Maurice, J., S., E. [NL/NL];

c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). JUESTEL, Thomas [DE/DE]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). SCHMIDT, Peter, J. [DE/DE]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

- (74) Agents: ROLFES, Johannes, G., A. et al.; Prof. Holst-laan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: LOW-PRESSURE VAPOR DISCHARGE LAMP WITH A MERCURY-FREE GAS FILLING



(57) Abstract: A low-pressure vapor discharge lamp has a radiation-transmitting discharge vessel (1) enclosing, in a gastight manner, a discharge space (3) provided with a gas filling. The gas filling is substantially free of mercury and comprises an indium compound and a buffer gas. The discharge vessel (1) comprises discharge means (2) for maintaining a gas discharge in the discharge space (3). The discharge vessel (1) is provided with a luminescent layer (4). The luminescent layer (4) comprises a luminescent material based on a nitridosilicate or on an oxonitridosilicate. Preferably, the luminescent material comprises rare-earth emitters. Preferably, the luminescent material comprises europium, cerium, or ytterbium emitters.

WO 2005/045881 A1



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report

 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.